

broken levees, and of Government works, "snagboats" and dredgers at various points, perhaps suggesting to more than one of the party that the place to control the floods is on the headwaters of the tributaries, not on the lower portion of the Mississippi itself. Cotton picking was seen on the journey across northern Mississippi and western Alabama, to Birmingham, on a hot, muggy day (Oct. 10), with southerly winds. Going north up the valley to Chattanooga the gradual decrease in cotton acreage was noticeable. A few hours in Asheville served to show the natural topographic and scenic advantages of that well-known health resort--far enough south to escape the deep snows, severe cold, and gray skies of the northern winters; far enough north, and high enough above sea level, to furnish a comfortable summer resort for those from the south. Singularly favored thus is Asheville, with the soft outlines of its forested mountains, its clean, pure air, its sunshine and its midway location.

between the extremes of north and south. Down the eastern slopes of the Appalachians and out through the Piedmont the journey continued, the forests, about equally heavy on both western and eastern slopes, showing that these mountains are not an effective climatic divide. The last day on the special train (Oct. 12) took the party through the beautiful orchards and farms of the Piedmont region, Virginia, and ended at Washington. On October 18, in New York, the party disbanded, on schedule time, exactly as planned many weeks before.

The members of the transcontinental excursion party, each in his own way, profited immensely from the trip. Geological, physiographical, botanical, ethnological, and other studies were made by its members, as their own interests or opportunities prompted them. But in the mind of the writer the great facts of weather and of climatic control, always, everywhere, were the most interesting study of all.

CONDENSED CLIMATOLOGICAL SUMMARY.

In the following table are given, for the various sections of the Climatological Service of the Weather Bureau, the average temperature and rainfall, the stations reporting the highest and lowest temperatures with dates of occurrence, the stations reporting the greatest and least monthly precipitation, and other data, as indicated by the several headings.

The mean temperatures for each section, the highest

and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperature and precipitation are based only on records from stations that have 10 or more years of observations. Of course the number of such records is smaller than the total number of stations.

CONDENSED CLIMATOLOGICAL SUMMARY OF TEMPERATURE AND PRECIPITATION BY SECTIONS, DECEMBER, 1912.

Temperature and precipitation by sections, December, 1912.

Section.	Temperature (°F.).										Precipitation (inches and hundredths).										
	Section average.	Departure from the normal.	Monthly extremes.					Section average.	Departure from the normal.	Greatest monthly.					Section average.	Departure from the normal.	Least monthly.				
			Station.	Highest.	Date.	Station.	Lowest.			Station.	Amount.	Station.	Amount.	Station.			Station.	Amount.	Station.	Amount.	
Alabama.....	47.7	+ 1.1	Troy.....	82	3	Riverton.....	14	13	6.51	+ 2.08	Demopolis.....	11.34	Alaga.....	2.02							
Arizona.....	40.1	- 3.9	2 stations.....	80	1	Springerville.....	-12	23	6.62	- 0.35	Chlarsons Mill.....	2.18	3 stations.....	0.00							
Arkansas.....	41.7	- 0.5	England.....	76	19	Putton.....	8	23	2.63	- 1.46	Portland.....	6.49	Rogers.....	0.05							
California.....	44.7	- 2.0	King City.....	89	7	Tamarack.....	-6	6	1.58	- 2.45	Weitehpee.....	15.59	40 stations.....	0.00							
Colorado.....	21.2	- 3.9	Monument.....	70	24	Fraser.....	-34	26†	0.58	- 0.40	Gladstone.....	2.11	2 stations.....	0.00							
Florida.....	62.7	+ 4.8	4 stations.....	86	4†	Garniers.....	24	28	2.43	- 0.65	Hypoluxo.....	8.43	do.....	0.66							
Georgia.....	49.3	+ 2.4	2 stations.....	83	7	Gore.....	18	14	3.50	- 0.67	Marshallville.....	5.92	Valona.....	1.36							
Hawaii (November).....	70.9	.....	Pahala, Hawaii.....	92	21	Huumula.....	33	24	6.42	- 0.46	Hakalau.....	34.36	2 stations.....	0.00						
Idaho.....	26.6	- 0.5	Lewiston.....	61	3	Pierson.....	-22	20†	1.75	- 0.47	Grand Forks.....	8.45	Garnet.....	0.15							
Illinois.....	34.1	+ 3.9	6 stations.....	64	5	Dakota.....	-2	12	0.93	- 1.27	Rileyville.....	2.82	Springfield.....	0.31							
Indiana.....	34.3	+ 3.2	Vevay.....	68	5	Auburn.....	-2	23	1.41	- 1.42	Scottsburg.....	3.26	Collegeville.....	0.24							
Iowa.....	29.2	+ 5.6	Keokuk.....	64	5	Inwood.....	-13	6	0.74	- 0.45	Northwood.....	1.75	2 stations.....	0.10							
Kansas.....	34.9	+ 2.4	2 stations.....	70	14	Oketa.....	-2	12	0.35	- 0.49	Chanute.....	1.12	3 stations.....	0.00							
Kentucky.....	37.2	- 0.7	Scott.....	73	1	2 stations.....	5	13	3.98	+ 0.23	Franklin.....	6.81	Pacific.....	2.12							
Louisiana.....	51.2	- 0.2	Reserve.....	90	16	Grand Cane.....	16	28	12.11	+ 7.36	Donaldsonville.....	28.03	Plain Dealing.....	3.04							
Maryland-Delaware.....	38.5	+ 4.0	Emmitsburg, Md.....	75	7	Oakland, Md.....	-10	26	3.94	+ 0.49	Suddlersville, Md.....	5.25	Cumberland, Md.....	1.81							
Michigan.....	28.6	+ 4.0	Allegan.....	62	4	Bergland.....	-14	12	1.62	- 0.66	Calumet.....	4.74	Plymouth.....	0.23							
Minnesota.....	20.0	+ 5.0	Pipestone.....	60	14	2 stations.....	-25	8†	0.93	+ 0.13	Duluth.....	2.19	Worthington.....	0.16							
Mississippi.....	47.1	- 0.6	Waynesboro.....	79	3	Corinth.....	18	13	9.44	+ 4.83	Woodsville.....	17.40	Austin.....	3.87							
Missouri.....	36.5	+ 2.9	Gano.....	72	5	Grand City.....	2	12	0.59	- 1.58	Caruthersville.....	2.36	Sublett.....	0.00							
Montana.....	28.0	+ 4.5	Heron.....	65	5	Bowen.....	-22	25	0.71	- 0.32	Saitese.....	10.78	Huntley.....	0.00							
Nebraska.....	30.4	+ 3.6	2 stations.....	68	11†	2 stations.....	-8	6†	0.23	- 0.45	Arden.....	1.10	6 stations.....	0.00							
Nevada.....	29.8	- 0.8	Jean.....	68	23	San Jacinto.....	-16	22	0.23	- 0.85	Spooners Ranch.....	1.10	do.....	0.00							
New England.....	31.7	+ 5.4	Chestnut Hill, Mass.....	76	19	2 stations.....	-15	13†	4.34	+ 1.07	Hyannis, Mass.....	7.44	Patten, Me.....	1.21							
New Jersey.....	36.9	+ 3.7	2 stations.....	68	6	Layton.....	-1	26	4.73	+ 0.90	Dover.....	6.33	2 stations.....	3.40							
New Mexico.....	29.4	- 4.0	Bell Ranch.....	75	3	Virsylva.....	-22	22	0.53	- 0.12	Hachita.....	3.67	3 stations.....	T.							
New York.....	31.5	+ 6.1	Waverly.....	67	6	Lake Placid Club.....	-10	9	2.84	- 0.37	Southampton.....	7.27	Harkness.....	0.19							
North Carolina.....	44.5	+ 2.8	Tarboro.....	80	5	Banners Elk.....	6	25	2.95	- 1.23	Highlands.....	7.11	Asheville.....	0.90							
North Dakota.....	18.9	+ 5.6	Medora.....	72	3	Willow City.....	-28	11	0.43	- 0.05	Bottineau.....	3.13	6 stations.....	T.							
Ohio.....	33.8	+ 2.9	Thurman.....	74	10	Bellefontaine.....	-5	12	2.26	- 0.54	Milligan.....	2.26	Napoleon.....	0.88							
Oklahoma.....	39.2	+ 0.4	Healdton.....	72	1	Kenton.....	0	21	0.70	- 0.61	Calvin.....	1.77	Beaver.....	0.00							
Oregon.....	35.5	- 0.3	Marshfield.....	66	8	Seneca.....	-15	20†	4.83	- 0.37	Happy Home.....	18.34	Richland.....	0.38							
Pennsylvania.....	34.4	+ 3.9	Coatesville.....	71	6	Pocono Lake.....	-4	26	3.27	+ 0.06	Pocono Lake.....	6.48	Center Hall.....	1.12							
Porto Rico.....	74.7	+ 0.2	Comerio Flats.....	93	11	Maricao.....	50	13†	3.92	- 1.63	Rio Grande.....	19.74	Central Aguirre.....	0.16							
South Carolina.....	48.8	+ 2.5	3 stations.....	79	4†	Greenville.....	18	14	2.88	- 0.48	Beaufort.....	6.01	Little Mountain.....	0.90							
South Dakota.....	26.4	+ 5.3	Hermosa.....	69	13	Roslyn.....	-18	11	0.30	- 0.35	Dumont.....	1.75	2 stations.....	0.00							
Tennessee.....	40.3	+ 0.2	2 stations.....	71	5†	Mountain City.....	-2	28	5.40	+ 1.20	Waynesboro.....	8.61	Covington.....	1.90							
Texas.....	46.3	- 3.9	Bay City.....	88	5	Dalhart.....	1	21	2.75	+ 0.78	Mont Belvieu.....	16.57	Stratford.....	0.00							
Utah.....	24.3	- 2.6	Emery.....	66	3	Strawberry Tunnel-East.....	-32	21	0.47	- 0.51	Thistle.....	3.80	Hanksville.....	0.00							
Virginia.....	40.1	+ 3.0	2 stations.....	77	6	Mountain Lake.....	-6	12	2.95	- 0.24	Speers Ferry.....	5.87	Lebanon.....	0.59							
Washington.....	35.8	+ 0.6	Kiona.....	76	3	Snyders Ranch.....	-2	21	5.13	- 0.28	Quinault.....	25.28	Kennicott.....	0.29							
West Virginia.....	35.8	+ 2.3	2 stations.....	76	4†	Marlinton.....	-6	25†	2.88	- 0.40	Pickens.....	5.35	Burlington.....	1.45							
Wisconsin.....	24.8	+ 5.1	Sheboygan.....	58	2	Solon Springs.....	-16	12†	1.81	+ 0.30	Solon Springs.....	3.20	Oshkosh.....	0.73							
Wyoming.....	21.4	- 1.3	Eatons Ranch.....	68	9	Foxpark.....	-31	22	0.77	- 0.27	Snake River, Y. N. P.....	3.11	4 stations.....	0.00							

† Other dates also.

In the above table in the February, 1911, Monthly Weather Review, page 310, the mean temperature departure for Virginia should read + (plus), instead of - (minus) as printed.

TABLE I.—Climatological data for United States Weather Bureau stations, December, 1912.

Districts and stations.	Elevation of instruments.		Pressure in inches.		Temperature of the air, in degrees Fahrenheit.						Precipitation, inches.		Wind.		Maximum velocity.		Average cloudiness, tenths.		Snow on ground at end of month.											
	Barometer above sea level, feet.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. + 2.	Mean maximum.	Date.	Mean minimum.	Date.	Mean minimum.	Greatest daily range.	Mean wet thermometer.	Mean temperature of the dew point.	Mean relative humidity, per cent.	Total movement, miles.	Miles per hour.	Date.	Clear days.	Cloudy days.	Total snowfall.								
							34.6 + 5.5	34.6 + 5.5		34.6 + 5.5		34.6 + 5.5		74	4.56 + 0.9	74	Total.	Direction.												
<i>New England.</i>																					5.8									
Fastport.....	76	67	85	29.82	29.90	- .08	28.7 + 3.4	50	3	36	- 1	13	21	31	27	23	78	5.83 + 1.9	14	10,029	sw.	44	se.	30	11	6	14	5.9	6.9	...
Greenville.....	1,070	6	28	27.70	29.90	- .08	22.2 + 3.4	47	5	31	9	14	36	29	22	67	2.14 + 1.9	8	7,405	sw.	47	s.	30	14	8	9	4.9	4.7	8.0	4.0
Portland, Me.....	103	81	117	29.84	29.97	- .06	32.3 + 5.2	55	6	39	9	26	27	29	22	4.16 + 0.5	8	4,279	nw.	28	w.	19	11	10	10	5.5	6.7	1.9		
Concord.....	288	70	79	29.67	30.00	- .06	31.8 + 5.4	61	6	40	8	24	35	37	31	3.71 + 0.4	10	11,352	s.	50	s.	10	10	8	18	7.2	1.4	...		
Burlington.....	404	11	48	29.52	29.97	- .08	29.0 + 6.3	59	6	36	5	22	27	34	27	1.15 + 0.5	10	11,352	s.	50	s.	10	10	8	18	7.2	1.4	...		
Northfield.....	876	12	60	28.98	29.96	- .09	27.2 + 6.7	61	6	36	0	18	33	24	20	78	1.90 + 0.5	10	6,429	s.	32	sw.	6	9	4	18	6.7	6.3	1.2	
Boston.....	125	115	188	29.85	29.99	- .05	35.5 + 6.9	69	45	15	9	32	27	34	26	5.36 + 2.0	10	8,723	w.	39	w.	9	12	12	12	5.0	9.2	...		
Nantucket.....	12	14	90	29.99	30.00	- .05	40.4 + 3.7	57	2	46	20	9	34	25	37	34	8.80 + 2.6	9	13,032	w.	58	ne.	24	15	4	12	5.5	8.7	...	
Block Island.....	26	11	46	29.98	30.01	- .05	41.0 + 4.4	57	2	46	18	9	36	23	38	34	7.66 + 1.8	7	15,756	sw.	64	nw.	28	10	8	13	6.0	5.5	...	
Narragansett.....	9																													
Providence.....	160	141	165	29.83	30.01	- .05	37.4 + 5.8	68	6	44	14	9	30	30	34	30	76	5.61 + 1.7	8	5,378	sw.	36	sw.	30	12	9	10	5.2	7.0	...
Hartford.....	159	122	140	29.83	30.01	- .06	36.5 + 6.7	67	6	43	13	9	30	28	32	26	69	4.46 + 0.9	7	6,312	sw.	41	nw.	28	9	7	15	6.3	7.0	...
New Haven.....	106	116	155	29.90	30.02	- .05	37.8 + 6.0	65	6	45	17	9	31	24	33	28	71	6.04 + 2.4	7	6,912	sw.	43	nw.	8	10	10	11	12.5	12.5	...
<i>Middle Atlantic States.</i>							39.2 + 4.2								74	3.47 + 0.3													5.8	
Albany.....	97	102	115	29.89	30.00	- .05	34.2 + 6.7	64	6	41	10	9	27	26	31	26	74	2.39 + 0.2	10	6,207	s.	34	s.	10	7	9	15	6.6	5.5	T.
Binghamton.....	871	78	88	29.06	30.02	- .07	33.6 + 5.9	65	6	40	13	27	28	34	28	1.57 + 0.9	10	5,107	w.	27	nw.	28	9	12	10	5.8	11.8	...		
New York.....	365	414	454	29.70	30.05	- .04	38.5 + 4.1	63	6	45	17	9	32	23	34	28	67	9.24 + 0.8	9	14,519	nw.	72	nw.	30	11	10	10	5.6	9.4	T.
Harrisburg.....	374	94	104	29.68	30.09	- .03	36.6 + 3.8	64	6	43	13	26	30	23	31	25	68	3.83 + 1.2	9	4,814	w.	30	nw.	27	10	11	10	5.7	7.5	...
Philadelphia.....	117	123	184	29.95	30.30	- .03	40.3 + 4.6	64	6	47	19	13	34	21	32	27	76	4.74 + 1.7	10	7,034	sw.	36	sw.	12	9	12	10	5.7	7.5	...
Seranton.....	805	111	119	29.16	30.04	- .06	35.5 + 5.7	65	6	43	13	9	28	27	32	29	81	4.07 + 1.5	10	6,127	s.	35	sw.	19	2	12	17	7.3	5.7	...
Atlantic City.....	52	37	48	30.02	30.09	- .01	41.4 + 5.0	67	6	49	19	13	34	22	37	34	80	4.23 + 0.5	11	6,160	w.	38	w.	30	12	8	11	5.4	4.7	...
Cape May.....	18	13	49	30.08	30.10	- .01	42.4 + 4.4	64	6	45	24	13	36	19	38	35	80	3.77 + 0.0	13	6,997	nw.	40	s.	30	13	6	12	5.0	4.8	...
Baltimore.....	123	100	112	29.96	30.10	- .03	40.6 + 3.7	71	6	48	20	13	34	24	36	31	73	4.17 + 1.1	13	4,376	sw.	29	w.	27	10	9	12	5.7	4.4	...
Washington.....	112	62	85	29.97	30.10	- .03	40.0 + 3.9	73	6	45	19	13	31	31	34	25	69	4.12 + 1.0	13	4,671	s.	37	nw.	27	12	7	12	5.0	8.5	...
Lynchburg.....	681	88	88	29.34	30.11	- .03	41.4 + 3.1	73	6	51	18	26	32	40	35	30	70	2.36 + 0.9	12	2,904	sw.	24	nw.	27	10	6	15	6.2	2.5	...
Mount Weather.....	1,725	10	54	28.18	30.07	- .06	36.2 + 4.7	66	6	44	9	29	26	32	25	66	3.52 + 0.4	12	13,648	nw.	74	nw.	28	9	11	8	15.5	5.5	...	
Norfolk.....	91	102	111	30.02	30.13	- .00	47.7 + 4.7	74	6	56	27	9	39	27	42	37	74	4.65 + 1.2	13	7,090	s.	58	w.	30	13	6	12	4.9	0.3	...
Richmond.....	144	11	52	29.96	30.12	- .02	43.2 + 2.2	74	6	52	17	13	34	30	37	32	73	2.84 - 0.2	13	5,733	s.	42	sw.	30	13	7	11	4.7	0.2	...
Wytheville.....	2,293	40	47	27.69	30.15	.00	36.4 + 1.1	66	6	46	11	26	27	31	32	28	79	1.61 - 2.1	10	4,579	w.	25	w.	30	13	5	13	5.4	5.0	...
<i>South Atlantic States.</i>							50.4 + 3.2								77	2.88 - 0.8													6.1	
Asheville.....	2,255	53	75	27.74	30.18	+ .02	39.9 + 2.1	66	5	49	14	13	31	33	34	29	69	0.90 - 3.2	8	6,871	nw.	30	nw.	27	11	7	13	5.9	0.3	...
Charlotte.....	773	68	76	29.29	30.14	- .02	45.4 + 2.5	73	6	53	24	13	37	28	40	35	72	1.34 - 2.5	13	4,692	sw.	29	s.	30	10	7	14	6.1	T.	...
Hatteras.....	11	12	47	30.12	30.13	.00	52.8 + 4.0	75	6	60	32	10	45	27	49	46	81	3.13 - 2.0	13	10,098	nw.	52	nw.	27	9	14	8	5.4	...	...
Monteagle.....	12	13	46				48.0 + 3.0								77	6.59 + 2.2													6.0	
Raleigh.....	376	103	110	29.72	30.14	- .01	46.4 + 3.7	73	6	55	23	13	38	30	40	35	70	3.58 + 0.4	15	5,380	sw.	38	w.	30	12	5	14	5.5	5.5	...
Wilmington.....	78	81	91	30.06	30.15	.00	51.5 + 4.3	73	6	61	24	13	32	34	46	42	78	2.64 + 0.5	15	5,106	w.	35	nw.	29	9	13	5.8	...	...	...
Charleston.....	48	91	92	30.10	30.15	.00	53.6 + 2.3	73	6	61	32	28	46	21	49	45	80	3.90 + 0.8	11	6,510	n.	31	nw.	19	4	8	19	7.2	...	...
Columbia, S. C.....	351	41	57	29.76	30.16	.00	49.6 + 2.4	77	6	58	26	28	41	30	43	38	71	2.09 + 0.8	11	4,362	sw.	33	sw.	30	12	5	14	5.6	...	...
Augusta.....	180	89	97	29.96	30.16	.00	50.1 + 3.1	76	6	58	27	28	42	28	50	48	84	3.83 - 0.6	13	3,856	w.	32	nw.	27	9	7	15	6.4	...	...
Savannah.....	65	150	194	30.08	30.16	+ .01	54.8 + 3.5	78	7	62	33	28	48	24	50	48	84	4.13 + 1.0	12	7,377	ne.	39	nw.	9	5	7	19	7.4	...	...
Jacksonville.....	43	96	129	30.09	30.14	+ .01	59.8 + 4.6	82	6	68	34	28	51	29	55	53	88	2.91 - 0.1	13	5,743	n.	29	w.	24	8	9	14	5.9	4.8	...
<i>Florida Peninsula.</i>							69.5 + 4.7								84	1.77 - 0.3													4.8	
Key West.....	22	41	49	30.06	30.08	.00	73.6 + 3.5	82	3	78	61	28	70	12	69	68	85	2.26 + 0.4	8	5,965	ne.	29	nw.</td							

TABLE I.—Climatological data for United States Weather Bureau stations, December, 1912—Continued.

Districts and stations.	Elevation of instruments.	Pressure in inches.		Temperature of the air, in degrees Fahrenheit.										Precipitation, inches.		Wind.		Maximum velocity.				
				Sea level, reduced to mean of 24 hours.																		
		Barometer above sea level, feet.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. + 2.	Mean maximum.	Departure from normal.	Maximum.	Date.	Mean minimum.	Greatest daily range.	Mean wet thermometer.	Total.	Departure from normal.	Days with 0.01, or more.	Total movement, miles.	Prevailing direction.	Miles per hour.	Direction.	
Ohio Valley and Tennessee.					37.5 + 0.8									72	3.29 - 0.1							5.8
Chattanooga.	702	189	213	29.35	30.18	+ .02	42.7 + 0.1	68	6	50	23	12	35	30	38	33	72	7.26 + 2.9	15	4,913 ne.	36 w.	30 9 6 16 6.3 T.
Knoxville.	996	93	100	29.08	30.16	- .00	39.7 + 0.0	70	6	48	18	13	32	30	36	31	75	6.42 + 2.3	13	3,258 ne.	24 w.	30 9 8 14 6.4 T.
Memphis.	399	76	97	29.75	30.19	+ .04	43.1 - 0.4	67	5	50	22	9	36	26	38	31	66	3.00 - 1.4	11	6,292 s.	28 nw.	26 12 4 15 5.5 T.
Nashville.	546	108	191	29.58	30.18	+ .03	40.4 - 0.7	66	5	44	11	12	28	30	31	31	72	5.14 + 1.3	6	6,480 s.	34 nw.	27 11 6 14 5.7 3.5
Lexington.	989	75	102	29.04	30.14	- .00	35.8 - 0.6	64	5	44	11	12	28	30	31	31	72	3.68 + 0.3	12	8,805 s.	41 se.	5 12 3 16 5.9 6.1
Louisville.	525	111	132	29.55	30.14	- .00	38.5 + 0.4	63	5	45	14	12	31	30	33	31	72	2.52 - 1.2	5	6,404 sw.	35 sw.	30 10 10 11 5.5 2.2
Evansville.	431	72	82	29.65	30.13	- .00	37.9 + 1.5	63	5	46	15	12	30	29	33	31	72	6.91 + 2.1	9	6,315 s.	30 s.	2 15 9 7 4.7 3.0
Indianapolis.	822	154	164	29.17	30.08	- .04	34.6 + 2.0	61	5	46	8	12	27	30	32	34	72	1.43 - 1.6	9	9,408 sw.	38 sw.	2 11 10 10 5.3 1.1
Cincinnati.	628	152	160	29.42	30.12	- .01	37.2 + 0.8	65	5	46	13	12	29	31	33	29	72	2.25 - 0.7	9	5,265 s.	35 w.	30 11 7 13 5.6 1.1
Columbus.	824	173	222	29.18	30.08	- .04	34.4 + 1.6	61	5	46	10	12	27	30	32	31	72	2.34 - 0.4	11	10,164 sw.	36 nw.	2 9 8 14 5.9 1.3
Dayton.	899	81	216	29.09	30.05	- .04	34.4 + 1.3	62	5	46	8	12	27	30	31	30	72	1.96 - 0.7	10	10,188 sw.	46 w.	2 9 8 14 6.1 3.0
Pittsburgh.	842	353	410	29.14	30.08	- .03	35.8 + 1.1	62	6	43	12	12	28	30	32	33	72	2.86 + 0.1	14	10,084 sw.	46 w.	2 6 13 6.1 5.7
Parkersburg.	638	77	84	29.45	30.13	- .01	37.0 + 1.5	67	5	46	13	12	28	30	32	33	72	2.62 - 0.2	13	5,148 s.	35 nw.	30 11 5 17 6.4 3.3
Elkins.	1940	41	50	28.01	30.14	+ .02	34.2 + 1.7	71	5	46	1	26	23	40	30	26	80	2.87 - 0.6	13	3,304 w.	30 w.	30 9 8 14 6.0 10.7 T.
Lower Lake Region.					32.9 + 3.8									76	1.90 - 1.0						7.2	
Buffalo.	767	178	206	29.12	29.96	- .10	34.4 + 4.3	59	5	40	14	12	28	24	32	29	80	2.21 - 1.2	12	16,887 sw.	72 sw.	2 3 10 18 7.5 5.2
Canton.	448	19	71	29.46	29.96	- .10	26.9 + 4.2	59	6	35	- 3	9	18	33	27	79	2.55 - 1.0	16	9,449 sw.	62 sw.	6 6 8 17 6.5 12.7 T.	
Oswego.	335	76	91	29.59	29.96	- .10	33.4 + 4.2	61	6	40	14	9	27	26	30	27	79	2.37 - 1.2	18	10,193 s.	42 nw.	19 2 9 20 8.0 13.0
Rochester.	523	86	102	29.40	29.99	- .07	33.9 + 5.0	61	6	40	12	9	28	27	30	25	71	1.75 - 1.1	11	7,926 s.	44 w.	6 3 9 19 7.6 6.9 T.
Syracuse.	597	97	113	29.33	29.98	- .09	33.2 + 4.9	63	6	40	11	9	26	29	30	25	74	1.90 - 0.8	15	11,225 s.	50 s.	2 6 9 16 7.0 7.9 T.
Erie.	714	92	102	29.21	29.99	- .08	34.5 + 2.8	60	6	40	14	12	29	26	31	27	74	2.59 - 0.5	13	11,288 sw.	36 w.	12 2 9 20 7.7 10.9
Cleveland.	762	190	201	29.18	30.02	- .07	33.8 + 2.7	60	6	40	11	12	27	31	30	26	73	1.33 - 1.2	11	13,417 sw.	46 nw.	8 6 19 6.9 4.3
Sandusky.	629	62	70	29.32	30.02	- .05	33.5 + 2.5	62	5	41	10	12	26	30	30	25	74	1.52 - 0.8	10	7,388 sw.	33 nw.	8 4 7 20 7.6 4.3
Toledo.	628	208	246	29.31	30.01	- .07	33.1 + 2.6	58	5	41	9	12	26	29	30	25	73	1.57 - 0.7	13	14,046 sw.	59 sw.	2 7 9 15 6.3 2.8
Fort Wayne.	856	113	124	29.08	30.03	- .03	33.0 + 5.7	60	5	40	5	12	26	32	30	26	73	1.07 - 0.7	12	9,931 sw.	44 sw.	2 6 10 15 6.4 0.2
Detroit.	730	218	256	29.17	29.98	- .09	32.0 + 2.5	58	5	38	11	12	25	30	29	29	72	1.26 - 1.1	15	11,745 w.	54 w.	2 12 9 20 7.9 3.6
Upper Lake Region.					28.0 + 3.5									79	1.67 - 0.5						7.3	
Alpena.	609	13	92	29.20	29.88	- .14	29.8 + 5.0	52	6	36	- 7	12	24	29	27	24	80	1.07 - 1.2	13	9,279 sw.	42 w.	6 1 10 20 8.1 9.4 0.5
Escanaba.	612	48	82	29.18	29.87	- .16	25.0 + 3.4	44	5	32	- 4	12	18	29	23	20	79	1.80 + 0.1	8	7,269 sw.	31 e.	17 6 7 18 7.0 7.1 1.5
Grand Haven.	632	54	92	29.23	29.93	- .12	33.6 + 3.5	55	5	39	11	12	28	24	31	28	79	1.75 - 0.8	16	12,888 sw.	45 sw.	6 4 7 20 7.3 3.8
Grand Rapids.	675	70	87	29.16	29.95	- .10	32.8 + 4.0	56	6	39	10	12	27	28	30	27	81	1.32 - 1.2	11	6,494 s.	28 w.	6 3 7 21 7.6 2.3
Lansing.	863	11	62	28.98	29.95	- .15	31.0 + 4.2	52	5	38	9	12	24	27	28	25	81	1.20 - 0.9	6	6,962 sw.	34 nw.	6 7 17 7.0 6.9 2.1
Houghton.	684	62	79	29.83	29.93	- .19	22.6 + 1.7	43	1	29	1	12	16	26	29	25	81	2.92 + 0.4	19	6,962 nw.	39 sw.	3 2 11 18 7.8 17.9 6.4
Marquette.	734	77	111	29.04	29.86	- .14	24.8 + 1.9	42	1	31	- 2	12	18	27	23	19	78	2.42 - 0.1	15	9,004 sw.	37 w.	6 5 19 7 14 4.7 T.
Port Huron.	638	78	120	29.24	29.95	- .11	30.8 + 2.5	55	6	37	10	12	24	26	28	25	80	1.29 - 0.9	17	10,226 sw.	37 w.	6 0 3 28 9.2 11.4 2.3
Sault Ste. Marie.	614	11	61	29.24	29.86	- .14	24.2 + 3.7	48	6	31	- 6	12	17	23	21	21	86	1.80 - 0.5	22	7,654 se.	39 w.	6 11 7 13 5.3 1.2 T.
Chicago.	823	140	310	29.08	29.99	- .09	33.4 + 4.1	57	5	40	3	12	26	29	30	24	88	1.80 - 1.0	9	12,263 sw.	45 sw.	6 11 7 13 5.3 1.2
Milwaukee.	681	119	133	29.17	29.93	- .13	30.8 + 4.8	54	1	38	2	12	24	27	27	23	74	1.34 - 0.6	6	9,068 sw.	40 se.	17 12 7 12 5.3 1.2
Green Bay.	617	49	86	29.20	29.89	- .15	27.4 + 6.1	62	5	35	- 3	12	20	37	24	21	79	1.49 - 0.3	10	9,906 sw.	40 sw.	6 7 10 14 6.7 4.9 T.
Duluth.	1,133	11	47	28.61	29.88	- .17	17.9 + 0.2	40	1	27	- 11	12	9	38	17	14	87	2.19 + 1.0	12	10,695 sw.	54 nw.	5 4 8 19 7 20 8.1
North Dakota.					19.8 + 8.0									82	0.57 0.0						5.7	
Moorhead.	940	8	57	28.88	29.94	- .14	17.6 + 6.9	44	9	29	- 10	22	6	41	16	14	87	0.95 + 0.2	8	6,979 nw.	35 nw.	30 14 3 14 5.5 9.2 6.5
Bismarck.	1,674	4	57	28.12	29.98	- .10	22.0 + 7.0	59	9	34	- 9	8	10	46	19	15	76	0.40 - 0.2	6	8,459 nw.	44 nw.	19 12 9 10 5.2 5.0 1.4
Devils Lake.	1,482	11	44	28.25	29.89	- .17	16.2 + 8.2	46	9	26	- 14	11	6	47	15	13	86	0.74 + 0.4	5	8,798 nw.	43 nw.	30 12 7 12 5.9 6.2 0.5
Williston.	1,896	40	47	27.87	29.92	- .14	23.5 + 9.9	52	9	35	- 10	11	12	42	20	16	77	0.18 - 0.4	5	5,530 sw.	48 nw.	7 5 15 11 1 16 1 1.6
Upper Mississippi Valley.					31.8 + 4.5									73	1.01 - 0.8						4.7	
Minneapolis.	918	102	208	28.97	29.91	- .17	23.2 + 3.9	49	1	33	- 4	12	15	35	21	16	74	1.54 + 0.5	8	9,777 nw.	40 nw.	7 11 6 14 5.5 13.6 2.6
St. Paul.	940	203	212	28.95	29.95	- .13	27.4 + 4.6	49	1	36	- 0	12	19	32	23	21	78	2.13 + 0.8	10	4,583 s.	21 nw.	2 9 10 12 6.0 0.5
La Crosse.	714	11	48	29.15	29.95	- .12	27.8 + 5.1	54	5	36	- 1	12	20	32	25	21	78	1.35 - 0.4	8	8,834 sw.	38 sw.	5 9 12 10 5.4 1.2
Madison.	974	70	78	28.86	29.96	- .12	30.2 + 5.7	55	5	39	1</td											

TABLE 1.—Climatological data for United States Weather Bureau stations, December, 1912—Continued.

Districts and stations.	Elevation of instruments.		Pressure in inches.		Temperature of the air, in degrees Fahrenheit.												Precipitation, inches.		Wind.					
	Barometer above sea level, feet.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Mean max. + mean min. + ²	Departure from normal.	Maximum.	Mean minimum.	Date.	Mean maximum.	Mean minimum.	Greater daily range.	Mean wet thermometer.	Total.	Days with 0.01, or more.	Total movement, miles.	Miles per hour.	Prevailing direction.	Maximum velocity.				
	27.0	+ 3.3	27.0	+ 3.3	27.0	+ 3.3	27.0	+ 3.3	27.0	+ 3.3	27.0	+ 3.3	27.0	+ 3.3	68	0.46	- 0.4	47	w.	18	5.7			
<i>Northern slope.</i>																								
Havre.....	2,505	11	44	27.25	29.95	- .10	28.7 + 7.5	54	13	40	1	1	17	37	26	23	79	0.11	- 0.5	4	9,121	sw.		
Miles City.....	2,371	26	48	27.41	30.04	- .06	31.9 + 10.9	54	27	40	13	5	23	33	27	23	74	0.08	- 0.5	5	4,465	w.		
Helena.....	4,221	87	114	25.77	30.07	- .06	30.4 + 5.6	48	3	38	10	11	23	26	19	19	63	0.37	- 0.4	10	7,631	sw.		
Kalispell.....	2,962	11	34	26.94	30.10	+ .03	27.2 + 3.3	48	3	34	6	21	20	23	25	21	79	0.69	- 1.2	10	3,450	w.		
Rapid City.....	3,234	46	50	26.54	30.05	- .04	30.8 + 4.8	62	9	42	2	22	20	38	25	15	53	0.21	- 0.2	5	6,425	w.		
Cheyenne.....	6,088	56	64	23.94	30.12	+ .03	25.3 - 3.7	51	14	36	-	5	25	15	32	21	62	0.63	+ 0.3	6	10,473	nw.		
Lander.....	5,372	60	68	24.63	30.19	+ .04	20.8 + 1.6	49	29	34	-	4	22	7	46	16	7	57	0.40	- 0.3	4	3,860	sw.	
Sheridan.....	3,790	9	47	26.06	30.08		28.6 - 3.2	38	9	26	-	8	21	11	25	16	76	0.21	-	8	6,135	w.		
Yellowstone Park.....	6,200	11	48	23.85	30.22	+ .06	18.4 - 3.2	38	9	26	-	8	21	11	25	16	76	1.47	- 0.4	18	6,932	s.		
North Platte.....	2,821	11	51	27.08	30.11	+ .01	29.6 + 3.0	60	14	43	5	6	16	38	23	18	71	0.18	- 0.3	2	6,115	w.		
<i>Middle slope.</i>							34.5 + 1.6																	
Denver.....	5,291	129	136	24.70	30.11	+ .03	30.5 - 1.7	60	14	43	3	6	18	36	24	15	54	0.45	- 0.2	4	6,972	sw.		
Pueblo.....	4,685	80	86	25.28	30.10	+ .02	31.2 - 0.5	66	14	47	1	21	15	45	24	13	50	0.02	- 0.4	1	5,956	nw.		
Concordia.....	1,398	42	50	28.55	30.07	+ .04	35.6 + 6.1	61	1	48	13	10	12	23	41	29	24	70	0.12	- 0.4	1	5,668	sw.	
Dodge City.....	2,509	11	51	27.43	30.12	+ .02	34.6 + 3.0	66	14	49	13	23	20	43	26	18	60	T.	- 0.6	0	7,559	nw.		
Wichita.....	1,364	139	158	28.61	30.09	- .02	36.2 + 2.0	59	1	46	19	6	26	31	30	23	64	0.85	+ 0.1	2	9,957	s.		
Oklahoma.....	1,214	10	47	28.82	30.14	+ .03	39.0 + 0.4	65	1	50	21	21	28	33	32	26	66	0.62	- 1.1	5	10,471	s.		
<i>Southern slope.</i>							39.7 - 4.0																	
Abilene.....	1,738	10	52	28.30	30.16	+ .05	43.4 - 1.6	69	4	53	25	27	34	36	29	63	1.31	+ 0.2	6	7,525	sw.			
Amarillo.....	3,676	10	49	26.30	30.14	+ .05	33.6 - 2.8	66	14	45	9	24	22	40	28	23	73	1.18	+ 0.4	4	8,316	sw.		
Del Rio.....	944	8	57	29.13	30.14	+ .04	47.5 - 4.9	76	5	57	24	24	38	41	23	23	76	1.76	+ 0.2	12	4,653	nw.		
Roswell.....	3,573	9	57	26.45	30.18	+ .11	34.3 - 6.9	68	14	48	-	2	24	20	46	29	23	69	1.10	+ 0.6	4	4,279	n.	
<i>Southern plateau.</i>							38.0 - 4.0																	
El Paso.....	3,762	110	133	26.27	30.12	+ .09	40.0 - 4.8	62	2	50	17	23	30	31	33	24	59	0.48	0.0	5	8,130	nw.		
Santa Fe.....	7,013	8	56	23.23	30.19	+ .13	25.9 - 4.4	53	15	36	5	6	16	29	20	13	63	0.79	0.0	5	5,235	n.		
Flagstaff.....	6,907	8	57	28.97	30.10	+ .06	24.6 - 3.8	50	30	36	0	11	13	39	30	23	50	0.56	-	5	3,720	n.		
Phoenix.....	1,108	50	56	28.92	30.12	+ .07	48.9 - 3.0	70	1	62	29	29	39	39	41	27	51	0.83	+ 0.2	1	5,623	n.		
Yuma.....	141	9	58	29.98	30.12	+ .07	52.2 - 3.5	73	1	65	29	29	39	39	41	27	44	0.22	- 0.2	1	5,996	nw.		
Independence.....	3,910	11	42	26.15	30.24	+ .12	36.4 - 5.2	68	31	51	12	27	22	45	31	24	68	0.00	- 0.8	0	24	24		
<i>Middle Plateau.</i>							37.0 - 3.1																	
Reno.....	4,532	56	63	25.61	30.28	+ .13	34.0 + 0.3	60	3	47	10	27	21	45	28	20	59	0.09	- 1.6	3	5,103	w.		
Tonopah.....	6,090	12	20	24.15	30.26		30.0 - 0.7	57	13	43	4	6	17	41	25	20	71	0.27	- 0.7	8	7,325	sw.		
Winnemucca.....	4,344	18	56	25.78	30.28	+ .10	30.0 - 0.7	57	13	43	4	6	17	41	25	20	76	T.	- 0.6	0	6,765	w.		
Modena.....	5,479	10	43	24.70	30.22	+ .10	26.8 - 4.9	53	13	41	1	27	13	40	22	18	76	T.	- 0.6	0	4,122	se.		
Salt Lake City.....	4,360	147	189	25.74	30.24	+ .09	30.7 - 1.4	51	14	38	12	22	24	20	26	20	66	0.80	- 0.5	7	4,907	nw.		
Durango.....	6,546	18	56	23.67	30.21	+ .14	23.3 - 5.0	45	8	37	2	7	10	37	17	11	67	0.44	- 1.0	6	3,244	nw.		
Grand Junction.....	4,602	43	51	25.53	30.26	+ .16	21.4 - 6.8	40	30	32	1	28	11	29	18	14	76	0.17	- 0.3	1	13	se.		
<i>Northern Plateau.</i>							31.2 - 0.1																	
Baker.....	3,466	48	53	26.57	30.26	+ .10	27.1 - 0.3	48	3	36	4	26	18	28	25	20	74	1.25	- 0.3	13	5,030	se.		
Boise.....	2,739	78	86	27.34	30.29	+ .09	31.6 - 0.6	53	13	39	9	26	24	27	28	24	73	0.83	- 0.9	13	3,503	se.		
Lewiston.....	757	40	48	29.36	30.19	+ .06	37.6 + 0.1	61	3	45	21	9	31	23	39	38	88	0.45	- 1.1	8	3,508	se.		
Pocatello.....	4,477	46	54	25.58	30.25	+ .06	27.4 - 1.0	51	13	36	2	21	19	30	24	21	78	0.20	- 0.7	7	7,044	sw.		
Spokane.....	1,929	101	110	28.04	30.15	+ .07	32.2 + 1.4	49	3	37	17	21	27	17	30	28	81	1.53	- 1.1	14	6,035	sw.		
Walla Walla.....	1,045	107	115																	3	6	5	20.7.5	1.9.1.0
<i>North Pacific Coast Region.</i>							41.8 + 0.2																	
							47.8 - 0.6																	
North Head.....	211	11	56	29.91	30.14	+ .11	44.2 - 0.1	60	8	48	35	24	40	14	44	42	89	7.18	- 0.3	21	15,075	e.		
Port Crescent.....	259	8	53	29.52	30.11	+ .13	39.5 + 1.2	50	2	45	30	5	34	16	27	30	62	- 0.3	21	3,910	s.			
Seattle.....	205	215	250	30.01	30.14	+ .13	41.6 + 0.4	51	17	46	32	8	38	38	9	43	- 1.6	17	9,202	se.				
Tacoma.....	213	113	120	29.92	30.15	+ .14	40.6 + 0.3	53	17	45	29	7	36	16	39	38	88	6.77	- 0.6	19	5,532	sw.		
Tatoosh Island.....	109	7	57	29.95	30.05	+ .09	43.6 - 0.3	51	17	47	34	27	40	12	43	42	95	12.23	- 2.4	25	16,219	e.		
Portland, Oreg.....	153	68	106	30.04	30.20	+ .13	41.4 + 0.1	54	29	46	30	27	37	18	40	37	85	8.01	+ 0.7	21	5,537	sw.		
Roseburg.....	510	9	57	29.70	30.26	+ .15	41.4 - 0.5	60	29	47	27	36	20	39	37	86	4.16	- 1.8	17	2,325	s.			
<i>Middle Pacific Coast Region.</i>							51.8 - 1.1																	
Eureka.....	80	73	89	30.20	30.27	+ .15	46.6 - 1.4	63	8	53	33	21	40	21	45	43	89	5.83	- 1.4	18	4,766	se.		
Mount Tamalpais.....	2,375	11	18	27.72	30.24	+ .12	44.2 - 3.4	59	8	49	33	25	40	17	40	36	75	3.16	- 0.7	10	1,025	nw.		
Point Reyes Light.....	490	7	18	29.67</																				

TABLE II.—Accumulated amounts of precipitation for each 5 minutes, for the principal storms in which the rate of fall equaled or exceeded 0.25 inch in any 5 minutes, or 0.80 in 1 hour, during December, 1912, at all stations furnished with self-registering gages.

Stations.	Date.	Total duration.		Total amount of precipitation.	Excessive rate.		Amount before excessive began.	Depths of precipitation (in inches) during periods of time indicated.													
		From—	To—		Began—	Ended—		5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Abilene, Tex.	1			0.23															.20		
Albany, N. Y.	6			0.26															.14		
Alpena, Mich.	2			0.43															*		
Amarillo, Tex.	22-23			0.70															*		
Anniston, Ala.	4			1.14															.35		
Asheville, N. C.	5			0.31															.20		
Atlanta, Ga.	4			0.68															.32		
Atlantic City, N. J.	30			0.76															.38		
Augusta, Ga.	23			1.77															.35		
Baker, Oreg.	29-30			0.41															*		
Baltimore, Md.	19			0.51															.16		
Bentonville, Ark.	1			0.26															.16		
Binghamton, N. Y.	18-19			0.61															*		
Birmingham, Ala.	4			1.93															.67		
Bismarck, N. Dak.	16-17			0.18															*		
Block Island, R. I.	30			1.54															.48		
Boise, Idaho	13			0.25															*		
Boston, Mass.	19			0.94															.31		
Buffalo, N. Y.	30			0.66															*		
Burlington, Vt.	18-19			0.70															*		
Cairo, Ill.	5			0.27															.11		
Canton, N. Y.	18-19			0.71															*		
Charles City, Iowa	1			0.68															*		
Charleston, S. C.	26			0.63															.53		
Charlotte, N. C.	4			0.20															.16		
Chattanooga, Tenn.	4			2.45															.78		
Cheyenne, Wyo.	25			0.22															*		
Chicago, Ill.	16-17			0.45															*		
Cincinnati, Ohio	5			0.56															.23		
Cleveland, Ohio	5			0.35															.11		
Columbia, Mo.	1			0.21															.09		
Columbia, S. C.	23			1.47															.25		
Columbus, Ohio	5			0.66															.19		
Concord, N. H.	27			1.23															*		
Concordia, Kans.	1			0.12															.07		
Corpus Christi, Tex.	3			0.35															.26		
Davenport, Iowa	1-2			0.34															*		
Dayton, Ohio	29-30			0.58															*		
Del Rio, Tex.	10			0.35															.13		
Denver, Colo.	4-5			0.31															*		
Des Moines, Iowa	1			0.22															.08		
Detroit, Mich.	2			0.31															.16		
Devils Lake, N. Dak.	14-15			0.24															*		
Dodge City, Kans.	10, 16			T.															T.		
Dubuque, Iowa	1			0.61															.11		
Duluth, Minn.	16-17			1.25															*		
Durango, Colo.	4-5			0.23															*		
Eastport, Me.	30			1.09															.35		
Elkins, W. Va.	30			0.73															*		
El Paso, Tex.	8			0.07															.05		
Erie, Pa.	5			0.27															.14		
Escanaba, Mich.	1			0.75															*		
Eureka, Cal.	14			0.75															.21		
Evansville, Ind.	5			0.44															.16		
Flagstaff, Ariz.	1-2			0.22															*		
Fort Smith, Ark.	22-23			0.32															*		
Fort Wayne, Ind.	1-2			0.44															.18		
Fort Worth, Tex.	8			0.47															.16		
Fresno, Cal.	15			0.35															.15		
Galveston, Tex.	3-4	3.10 p. m.	D. N. a.m.	1.46	4.35 p. m.	4.58 p. m.	.01	.13	.26	.45	.52	.57									
Do.	4-5	10.10 p. m.	D. N. a.m.	1.23	11.21 p. m.	11.54 p. m.	.11	.09	.15	.40	.54	.67	.72	.75							
Do.	21-22	D. N. a.m.	6.10 a. m.	1.80	7.23 a. m.	8.06 a. m.	.07	.25	.31	.32	.34	.43	.53	.63	.80	.89	.90	.76	.90		
Do.	22-23	8.05 a. m.	6.15 a. m.	1.83	1.45 a. m.	2.48 a. m.	.74	.16	.25	.28	.29	.31	.35	.37	.39	.47					
Grand Haven, Mich.	1-2			0.82															*		
Grand Junction, Colo.	4			0.17															*		
Grand Rapids, Mich.	2			0.48															.20		
Green Bay, Wis.	1-2			0.73															*		
Hannibal, Mo.	16			0.24															.19		
Harrisburg, Pa.	19			0.67															.21		
Hartford, Conn.	30			1.11															.32		
Hatteras, N. C.	30	12.07 p. m.	1.50 p. m.	0.38	12.37 p. m.	12.45 p. m.	.07	.15	.30												
Havre, Mont.	4			0.04															*		
Helema, Mont.	4			0.14															*		
Houghton, Mich.	5-6			1.00															*		
Houston, Tex.	2	D. N. a. m.	5.40 a. m.	1.36	2.23 a. m.	2.47 a. m.	.01	.33	.60	.70	.80	.87									
Do.	3	9.50 a. m.	6.20 p. m.	2.03	11.42 a. m.	11.55 a. m.	.26	.32	.63	.80											
Do.	11	D. N. a. m.	9.57 a. m.	1.63	4.14 a. m.	5.08 a. m.	.01	.07	.12	.17	.24	.33	.41	.51	.50	.66	.71	.80	*		
Huron, S. Dak.	5			0.10																	
Independence, Cal.	(1)			0.32															.19		
Indianapolis, Ind.	1			0.41															.14		
Iola, Kans.	1			1.01																	
Jacksonville, Fla.	1-2	11.10 p. m.	10.45 a. m.	1.03	5.56 a. m.	6.11 a. m.	.38	.12	.30	.41											
Kalispel, Mont.	3			0.26															*		
Kansas City, Mo.	1			0.65															.19		
Keokuk, Iowa.	3			0.27															*		
Key West, Fla.	15	12.25 p. m.	2.20 p. m.	1.06	1.33 p. m.	1.57 p. m.	.02	.19	.55	.77	.91	1.02									
Knoxville, Tenn.	4			2.01															.46		
La Crosse, Wis.	1-2			1.01															*		
Lander, Wyo.	4			0.18															*		
Lansing, Mich.	1-2			0.36															*		
La Salle, Ill.	1																				

TABLE II.—Accumulated amounts of precipitation for each 5 minutes, for the principal storms in which the rate of fall equaled or exceeded 0.25 inch in any 5 minutes, or 0.80 in 1 hour, during December, 1912, at all stations furnished with self-registering gages—Continued.

Stations.	Date.	Total duration.		Total amount of precipitation.	Excessive rate.		Amount before excessive rate began.	Depths of precipitation (in inches) during periods time indicated.												
		From—	To—		Began—	Ended—		5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Macon, Ga.	23			1.98																.33
Madison, Wis.	1-2			0.90															(*)	
Marquette, Mich.	17			0.72															(*)	
Memphis, Tenn.	5			0.51															.37	
Meridian, Miss.	3-4	6.40 p. m.	9.15 a. m.	2.73	11.18 p. m.	11.29 p. m.	.39	.12	.37	.41										
Miami, Fla.	17	7.55 p. m.	10.10 p. m.	0.62	9.12 p. m.	9.39 p. m.	.03	.28	.32	.32	.32	.44	.53						*	
Milwaukee, Wis.	1-2			0.95															*	
Minneapolis, Minn.	16-17			0.76																
Mobile, Ala.	4	D. N. a. m.	D. N. a. m.	1.26	1.55 a. m.	2.17 a. m.	.08	.30	.72	.33	1.07	1.14							T.	
Modena, Utah	2			T.																
Montgomery, Ala.	4	2.00 a. m.	3.15 p. m.	1.73	9.59 a. m.	10.30 a. m.	.86	.06	.21	.46	.54	.61	.67	.71					*	
Moorehead, Minn.	24			0.42																.31
Mount Tamalpais, Cal.	14			0.68															*	
Mount Weather, Va.	30			0.94																
Nantucket, Mass.	30	8.40 a. m.	8.20 p. m.	1.56	5.29 p. m.	5.44 p. m.	.68	.21	.48	.57										
Nashville, Tenn.	5			1.20																.37
New Haven, Conn.	30			1.52																.47
New Orleans, La.	4	8.55 a. m.	10.35 a. m.	0.72	9.04 a. m.	9.16 a. m.	.02	.30	.50	.66										
New York, N. Y.	5	7.27 a. m.	4.30 p. m.	2.01	7.01 a. m.	7.33 a. m.	.03	.20	.44	.53	.64	.75	.79							
Norfolk, Va.	30			1.17																.25
Northfield, Vt.	30			0.52																*
North Head, Wash.	24			0.92																.27
North Platte, Nebr.	5			0.12																*
Oklahoma, Okla.	1			0.32																.18
Omaha, Nebr.	1			0.24																.12
Oswego, N. Y.	12			0.55																*
Palestine, Tex.	23			0.66																.29
Parkersburg, W. Va.	18			0.22																.18
Pensacola, Fla.	26-27	9.40 p. m.	3.50 a. m.	1.23	11.52 p. m.	12.36 a. m.	.19	.09	.23	.33	.39	.48	.55	.60	.67	.72				
Peoria, Ill.	16			0.53																.16
Philadelphia, Pa.	30			1.71																.32
Phoenix, Ariz.	8			0.69																.19
Pierre, S. Dak.	16			0.01																*
Pittsburgh, Pa.	5			0.87																.25
Pocatello, Idaho	31			0.10																*
Point Reyes Light, Cal.	14			0.41																.10
Port Huron, Mich.	5			0.24																.21
Portland, Me.	2			0.64																.31
Portland, Oreg.	29			2.23																.28
Providence, R. I.	2			0.74																.44
Pueblo, Colo.	4			0.02																*
Raleigh, N. C.	4			0.50																.29
Rapid City, S. Dak.	7			0.11																*
Reading, Pa.	30			1.44																.37
Red Bluff, Cal.	14			0.57																.29
Reno, Nev.	15			0.07																*
Richmond, Va.	30			0.41																.29
Rochester, N. Y.	27			0.46																*
Roseburg, Oreg.	24			0.65																.21
Roswell, N. Mex.	6			0.58																*
Sacramento, Cal.	13			0.10																.05
St. Joseph, Mo.	1			0.51																.15
St. Louis, Mo.	16	*		0.17																.13
St. Paul, Minn.	16-17			0.56																*
Salt Lake City, Utah	15-16			0.30																
San Antonio, Tex.	3			0.60																.49
San Diego, Cal.	15			0.03																.03
Sand Key, Fla.	17	5.15 p. m.	5.45 p. m.	0.34	5.26 p. m.	5.35 p. m.	0.03	0.09	0.30											*
Sandusky, Ohio	29-30			0.48																
San Francisco, Cal.	14			0.57																.30
San Jose, Cal.	14			0.25																.11
San Luis Obispo, Cal.	14			0.14																.09
Santa Fe, N. Mex.	26			0.39																*
Sault Ste. Marie, Mich.	1-2			0.60																*
Savannah, Ga.	31-1	D. N. a. m.	D. N. a. m.	1.48	5.18 p. m.	5.40 p. m.	.81	.10	.29	.36	.48	.55								*
Scranton, Pa.	27			0.84																.18
Seattle, Wash.	31			0.58																*
Sheridan, Wyo.	10			0.14																
Shreveport, La.	23			0.82																.31
Sioux City, Iowa	5			0.50																*
Southeast Farallon, Cal.	14			0.59																.24
Spokane, Wash.	29			0.49																*
Springfield, Ill.	10-17			0.17																*
Springfield, Mo.	4			0.13																*
Syracuse, N. Y.	5-6			0.47																*
Tacoma, Wash.	17			0.46																.31
Tampa, Fla.	31			0.42																.30
Tatoosh Island, Wash.	28-29			1.39																*
Taylor, Tex.	3	6.39 a. m.	D. N. p. m.	1.43	2.18 p. m.	2.37 p. m.	.77	.26	.38	.48	.54									.32
Terre Haute, Ind.	2			0.35																.
Thomasville, Ga.	31			2.70																.61
Toledo, Ohio	2			0.40																.14
Tonopah, Nev.	4			T.																
Topeka, Kans.	1			0.31																.11
Valentine, Nebr.	4			0.07																.02
Vicksburg, Miss.	2	D. N. a. m.	6.02 a. m.	0.51	3.20 a. m.	3.28 a. m.	.02	.28	.41											
Walla Walla, Wash.																				
Washington, D. C.	19			0.64																.33
Wichita, Kans.	1			0.77																.31
Williston, N. Dak.	16			0.09																*
Wilmington, N. C.	18			0.50																.25
Winnemucca, Nev.	3-4			0.09																*
Wytheville, Va.	4			0.45																.17
Yankton, S. Dak.	5			0.47																*
Yellowstone Park, Wyo.	29-30																			

TABLE III.—*Data furnished by the Canadian Meteorological Service, December, 1912.*

	Pressure in inches.			Temperature.						Precipitation.		
	Station reduced to 24-hour mean.	Sea level reduced to 24-hour mean.	Depart- ture from normal.	Mean max. + mean min. + 2.	Depart- ture from normal.	Mean maxi- mum.	Mean mini- mum.	Highest.	Lowest.	Total.	Depart- ture from normal.	Total snowfall.
CANADIAN STATIONS.												
St. John's, N. F.	29.57	29.71	-.12	29.9	+.1.2	36.7	23.1	50	8	6.00	+0.97	9.0
Sydney, C. B. I.	29.78	29.82	-.07	30.8	+.2.6	38.4	23.2	58	6	6.26	+1.63	9.0
Halifax, N. S.	29.78	29.89	-.07	30.5	+.2.9	38.9	22.1	55	5	8.41	+3.29	19.5
Grand Manan, N. B.												
Yarmouth, N. S.	29.86	29.93	-.05	34.0	+.3.3	41.0	27.0	56	13	6.21	+1.17	7.7
Charlottetown, P. E. I.	29.79	29.83	-.11	27.2	+.2.9	34.1	20.2	50	0	6.83	+3.17	8.5
Chatham, N. B.	29.84	29.87	-.07	20.1	+.3.1	29.0	11.2	46	-13	3.16	-0.06	9.6
Father Point, Que.	29.83	29.86	-.09	17.2	+.1.8	25.2	9.2	44	-10	1.92	-0.91	10.2
Quebec, Que.	29.55	29.89	-.12	18.6	+.3.4	26.3	10.9	49	-12	3.02	-0.67	17.5
Montreal, Que.												
Stonecliffe, Ont.	29.28	29.86	-.15	18.2	+.3.2	25.9	10.5	40	-10	1.07	-1.42	6.0
Ottawa, Ont.	29.66	30.00	-.02	22.8	+.5.8	30.0	15.7	50	-1	2.31	-0.60	17.4
Kingston, Ont.	29.64	29.96	-.08	30.6	+.6.9	38.0	23.2	54	5	2.43	-0.81	7.6
Toronto, Ont.	29.55	29.95	-.10	32.6	+.5.6	38.7	26.5	56	11	1.85	-1.06	6.3
White River, Ont.												
Port Stanley, Ont.	29.31	29.97	-.10	31.6	+.3.2	38.0	25.2	52	10	3.37	+0.95	11.2
Southampton, Ont.	29.17			30.4	+.3.7	35.9	24.8	56	10	3.24	-0.74	16.4
Party Sound, Ont.	29.17	29.89	-.12	25.7	+.4.5	34.5	16.9	52	-5	7.80	+3.32	52.5
Port Arthur, Ont.	29.12	29.85	-.14	15.4	+.2.2	24.6	6.3	40	-14	0.78	-0.09	6.3
Winnipeg, Man.	29.01	29.88	-.14	12.5	+.8.4	19.9	5.1	39	-16	0.78	-0.13	7.8
Minnedosa, Man.	27.97	29.87	-.15	10.2	+.4.5	18.8	1.5	36	-23	0.84	+0.22	8.4
Qu'Appelle, Sask.	27.50	29.83	-.17	14.4	+.7.0	24.2	4.6	39	-17	0.94	+0.42	9.4
Medicine Hat, Alberta.	27.53	29.85	-.12	29.4	+.11.2	40.3	18.5	52	4	0.36	+0.19	3.0
Swift Current, Sask.	27.25	29.91	-.08	22.4	+.6.4	31.5	13.4	46	-10	0.38	-0.40	3.8
Calgary, Alberta.	26.24	29.85	-.09	28.4	+.10.2	38.1	18.8	51	0	T.	-0.59	T.
Banff, Alberta.	25.22	29.97	+.03	21.0	+.1.9	27.4	14.5	38	-4	0.37	-0.84	3.7
Edmonton, Alberta.	27.39	29.74	-.19	21.8	+.8.7	31.1	12.4	45	-18	0.10	-0.60	1.0
Prince Albert, Sask.												
Battleford, Sask.												
Kamloops, B. C.	28.68	29.98	+.04	29.8	+.0.9	35.7	24.0	46	11	0.54	-0.24	4.0
Victoria, B. C.	29.97	30.07	+.10	41.3	+.0.1	44.8	37.8	50	31	5.84	-2.14	
Barkerville, B. C.	25.52	29.92	+.04	21.0	+.0.1	26.9	15.2	36	2	6.01	+2.84	60.1
Hamilton, Bermuda.	30.07	30.23	+.11	65.6	+.0.9	71.0	60.1	76	56	2.22	-2.27	

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